

[illegible]

&lt;120&gt; IMMUNOGENIC COMPOSITIONS FOR INDUCTION OF ANTI-TUMOR IMMUNITY

<140> 09/445,602

<150> PCT/IL98/00266

<150> IL 121041

<160> 25

<210> 1

<211> 104

<212> PRT

<213> Mus musculus

<400> 1

Gly Tyr Thr Phe Thr Ser Ser Trp Ile Asn Trp Val Lys Gln Arg Pro  
20 25 30

Gly Gln Gly Leu Glu Trp Ile Gly Glu Ile Asp Pro Ser Asp Ser Tyr  
35 40 45

Thr Asn Tyr Asn Gln Asn Phe Lys Asp Lys Ala Thr Leu Thr Val Asp  
50 55 60

Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu  
65 70 75 80

Asp Ser Ala Val Tyr Tyr Cys Ala Arg Leu Leu Arg Tyr Phe Ala Met  
85 90 95

Asp Tyr Trp Gly Gln Gly Thr Thr  
100

<210> 2

<211> 103

<212> PRT

<213> Mus musculus

<400> 2

Phe Leu Ser Cys Ile Ser Gly Ala Glu Gly His His Leu Ile Gln Gly  
1 5 10 15

Gln Gln Lys Cys Gln Tyr Ile Trp Leu Tyr Tyr Met His Trp Asn Gln  
20 25 30

Gln Lys Pro Gly Gln Pro Pro Arg Leu Leu Ile Tyr Leu Val Ser Asn  
35 40 45

Leu Glu Ser Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr  
50 55 60

Asp Phe Thr Leu Asn Ile His Pro Val Glu Glu Glu Asp Ala Ala Thr  
65 70 75 80

Tyr Tyr Cys Gln His Ile Arg Glu Leu Thr Arg Ser Glu Gly Gly Pro  
85 90 95

Ser Trp Arg Ser Ile Arg Ile  
100

<210> 3

<211> 106

<212> PRT

<213> Mus musculus

<400> 3

Ser Trp Val Lys Pro Gly Ala Ser Val Lys Ile Pro Cys Lys Ala Ser  
1 5 10 15

Gly Tyr Thr Phe Thr Asp Tyr Asn Met Asp Trp Val Lys Gln Ser His  
20 25 30

Gly Lys Ser Leu Glu Trp Ile Gly Asp Ile Asn Pro Asn Asn Gly Tyr  
35 40 45

Thr Ile Tyr Asn Gln Lys Val Lys Gly Lys Ala Thr Leu Thr Val Asp  
50 55 60

Lys Ser Ser Asn Thr Ala Tyr Met Glu Leu Arg Ser Leu Thr Ser Glu  
65 70 75 80

Asp Thr Ala Val Tyr Tyr Cys Val Arg Gly Gly Gly Leu Lys Gly Tyr  
85 90 95

Pro Phe Val Tyr Trp Gly Gln Gly Thr Thr  
100 105

<210> 4

<211> 92

<212> PRT

<213> Mus musculus

<220>

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 <223> Xaa is any amino acid

<220>  
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 <222> (90)..(90)  
 <223> Xaa is any amino acid

<400> 4

Lys	Val	Thr	Ile	Thr	Cys	Ser	Ala	Ser	Ser	Ser	Val	Asn	Phe	Met	His
1				5					10					15	
Trp	Phe	Gln	Gln	Lys	Pro	Gly	Thr	Ser	Pro	Lys	Leu	Trp	Ile	Tyr	Ser
		20						25					30		
Thr	Ser	Asn	Leu	Ala	Ser	Gly	Val	Pro	Ala	Arg	Phe	Ile	Gly	Ser	Gly
		35					40					45			
Ser	Gly	Thr	Ser	Xaa	Ser	Leu	Thr	Ile	Ser	Arg	Met	Glu	Ala	Glu	His
	50					55					60				
Ala	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Arg	Ser	Ser	Phe	Pro	Phe	Thr	Tyr
65					70					75					80
Gly	Ser	Gly	Thr	Lys	Xaa	Glu	Ile	Gln	Xaa	Asp	Pro				
				85					90						

<210> 5  
 <211> 111  
 <212> PRT  
 <213> Mus musculus

<400> 5

Leu	Gln	Glu	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala	Ser	Val	Lys
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Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Asp	Tyr	Tyr	Met	Asn
		20						25					30		
Trp	Val	Lys	Gln	Ser	His	Gly	Lys	Ser	Leu	Glu	Trp	Ile	Gly	Asp	Ile
		35					40					45			
Tyr	Pro	Asn	Asn	Gly	Phe	Thr	Thr	Tyr	Asn	Gln	Lys	Phe	Lys	Gly	Lys
	50					55					60				
Ala	Thr	Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Asn	Glu	Leu
65					70					75					80

Arg Asn Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Ser  
85 90 95

Gly Ser Arg Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val His Arg  
100 105 110

<210> 6  
<211> 109  
<212> PRT  
<213> Mus musculus

<400> 6

Met Asp Ile Gln Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Thr Pro  
1 5 10 15

Gly Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Asn  
20 25 30

Asn Leu His Trp Tyr Gln Gln Lys Ser His Glu Ser Pro Arg Leu Leu  
35 40 45

Ile Lys Phe Ala Ser Gln Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser  
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn Ser Val Glu  
65 70 75 80

Thr Glu Asp Phe Gly Val Tyr Phe Cys Gln Gln Ser Asn Ser Trp Pro  
85 90 95

Val His Ala Arg Gly Gly Gly Thr Lys Leu Glu Asn Leu  
100 105

<210> 7  
<211> 112  
<212> PRT  
<213> Mus musculus

<400> 7

Leu Gln Glu Ser Gly Ala Glu Leu Val Arg Ser Gly Ala Ser Val Lys  
1 5 10 15

Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr Tyr Met His  
20 25 30

Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile Gly Trp Ile  
35 40 45

Asp Pro Glu Asn Gly Asp Thr Glu Tyr Ala Pro Lys Phe Gln Gly Lys  
50 55 60

Ala Thr Met Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr Leu Gln Leu  
65 70 75 80

Ser Ser Leu Ala Ser Glu Asp Thr Ala Val Tyr Tyr Cys Asn Phe Tyr  
85 90 95

Gly Asp Ala Leu Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser  
100 105 110

<210> 8  
<211> 112  
<212> PRT  
<213> Mus musculus

<400> 8

Pro Gln Asp Ile Gln Leu Thr Gln Ser Pro Leu Thr Leu Ser Val Thr  
1 5 10 15

Ile Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu  
20 25 30

Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly  
35 40 45

Gln Ser Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly  
50 55 60

Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu  
65 70 75 80

Lys Ile Asn Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp  
85 90 95

Gln Gly Thr His Ser Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Lys  
100 105 110

<210> 9  
<211> 17  
<212> PRT  
<213> Mus musculus

<400> 9

Glu Ile Asp Pro Ser Asp Ser Tyr Thr Asn Tyr Asn Gln Asn Phe Lys  
1 5 10 15

Asp

<210> 10  
<211> 9  
<212> PRT  
<213> Mus musculus

<400> 10

Leu Leu Arg Tyr Phe Ala Met Asp Tyr  
1 5

<210> 11

<211> 8  
<212> PRT  
<213> Mus musculus

<400> 11

Gln His Ile Arg Glu Leu Thr Arg  
1 5

<210> 12  
<211> 17  
<212> PRT  
<213> Mus musculus

<400> 12

Asp Ile Asn Pro Asn Asn Gly Tyr Thr Ile Tyr Asn Gln Lys Val Lys  
1 5 10 15

Gly

<210> 13  
<211> 11  
<212> PRT  
<213> Mus musculus

<400> 13

Gly Gly Gly Leu Lys Gly Tyr Pro Phe Val Tyr  
1 5 10

<210> 14  
<211> 9  
<212> PRT  
<213> Mus musculus

<400> 14

Gln Gln Arg Ser Ser Phe Pro Phe Thr  
1 5

<210> 15  
<211> 17  
<212> PRT  
<213> Mus musculus

<400> 15

Asp Ile Tyr Pro Asn Asn Gly Phe Thr Thr Tyr Asn Gln Lys Phe Lys  
1 5 10 15

Gly

<210> 16  
<211> 7  
<212> PRT

<213> Mus musculus

<400> 16

Ser Gly Ser Arg Phe Asp Tyr  
1 5

<210> 17

<211> 10

<212> PRT

<213> Mus musculus

<400> 17

Gln Gln Ser Asn Ser Trp Pro Val His Ala  
1 5 10

<210> 18

<211> 17

<212> PRT

<213> Mus musculus

<400> 18

Trp Ile Asp Pro Glu Asn Gly Asp Thr Glu Tyr Ala Pro Lys Phe Gln  
1 5 10 15

Gly

<210> 19

<211> 7

<212> PRT

<213> Mus musculus

<400> 19

Tyr Gly Asp Ala Leu Asp Tyr  
1 5

<210> 20

<211> 9

<212> PRT

<213> Mus musculus

<400> 20

Trp Gln Gly Thr His Ser Pro Leu Thr  
1 5

<210> 21

<211> 17

<212> PRT

<213> Mus musculus

<400> 21

Tyr Tyr Cys Gln His Ile Arg Glu Leu Thr Arg Ser Glu Gly Gly Pro  
 1 5 10 15

Ser

<210> 22  
 <211> 20  
 <212> PRT  
 <213> Mus musculus

<400> 22

Gly Val Tyr Tyr Cys Trp Gln Gly Thr His Ser Pro Leu Thr Phe Gly<sup>-</sup>  
 1 5 10 15

Ala Gly Thr Lys  
 20

<210> 23  
 <211> 20  
 <212> PRT  
 <213> Mus musculus

<400> 23

Gly Asp Ile Asn Pro Asn Asn Gly Tyr Thr Ile Tyr Asn Gln Lys Val  
 1 5 10 15

Lys Gly Lys Ala  
 20

<210> 24  
 <211> 20  
 <212> PRT  
 <213> Mus musculus

<400> 24

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ser Arg Phe Asp Tyr Trp Gly  
 1 5 10 15

Glu Gly Thr Thr  
 20

<210> 25  
 <211> 20  
 <212> PRT  
 <213> Mus musculus

<400> 25

Val Tyr Phe Cys Gln Gln Ser Asn Ser Trp Pro Val His Ala Arg Gly  
 1 5 10 15

Gly Gly Thr Lys  
 20